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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,651	03/28/2006	Masaya Sakai	288619US2PCT	5670

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
CHAN, KAWING

ART UNIT	PAPER NUMBER
2837	

NOTIFICATION DATE	DELIVERY MODE
02/24/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No.	Applicant(s)	
	10/573,651	SAKAI ET AL.	
	Examiner	Art Unit	
	Kawing Chan	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *6-9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,10 and 14-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/22/09 has been entered.

Claims 6-9 and 11-13 were previously withdrawn.

Claims 1-5, 10 and 14-20 are pending for examination.

Response to Arguments

2. In response to applicant's argument with respect to claims 1 and 18 "…both Tanahashi et al. and Uetake et al. operate on the basis of current temperature states, and not a continuous future temperature predicted state", Tanahashi discloses equations (Eqns 4 & 5 in Column 3) for calculating a continuous future predicted temperature state of a motor. First of all, in equation 4, Tanahashi explains how to calculate a continuous predicted temperature state of a motor in a period of time (e.g. time 0->t). The predicted temperature state is continuous because an integral (as shown in Eqn 4) can only evaluate a continuous function. Then, in equation 5, Tanahashi explains the continuous future predicted temperature a motor is calculated

by adding the predicted change of temperature of the motor (as calculated by the integral in eqn 5) to a measured current temperature (θ_a as shown in eqn 5). Therefore, the evaluated temperature (θ_Y as shown in eqn 5) is a continuous future predicted temperature state of the motor.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-5, 10, 14 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uetake (JP 2002-003091 A) in view of Tanahashi et al. (US 4,629,035).

In Re claims 1 and 18, Uetake discloses an elevator controller comprising: a main control unit (Paragraph [0002]) for controlling running of an elevator, wherein the main control unit calculates a temperature state of a predetermined componential (main control unit 2) of the elevator (Paragraph [0002]), compares the temperature state to a permitted temperature state (a preset threshold), and changes at least one of a plurality of elevator travel parameters (acceleration) if the temperature state is outside of the permitted temperature state, and performs an operation control of the component of the elevator (lower the acceleration) based on a result of the comparison (Abstract; Claims 1-2; Paragraphs [0008-0011]).

Uetake fails to disclose the permitted temperature state is a range of temperature states; however, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to compare the temperature state of the elevator with a range of permitted temperature states, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art.

Uetake also fails to disclose the calculated temperature state of the component of the elevator is a continuous future predicted temperature state.

However, with reference to Figure 1, Tanahashi discloses an elevator controller which is capable of calculating a continuous future predicted temperature state of a component of the elevator (Eqn 4 projects the temperature rise of the rotor at any time point between 0 to t, which means it predicts the continuous temperature state of the rotor at any time between 0 to t).

Since Tanahashi discloses an elevator controller which is capable of elevating optimum travel parameter (e.g. speed of the elevator--by controlling the current supplies to the motor) based on the temperature changes in the motor (by comparing predicted temperature to a preset temperature threshold), it would have been obvious to one having ordinary skill in the art at the time of the invention was made to adjust the operation control of the elevator based on the comparison between predicted temperature state and preset temperature threshold so as to be able to operate the elevator in its optimum setting.

In Re claim 2, with reference to Figure 1, Tanahashi teaches the elevator controller further comprising:

- A thermal sensing device (15) that detects a temperature of the component (Col 2 line 63 to Col 3 line 2);
- Change amount input means (23) for inputting a predetermined change amount concerning the component (Eqn 4: temperature rise of the rotor $\Delta\theta_Y$);
- Wherein the main control unit calculates a predicted value of a continuous temperature state of the component using the temperature detected by the thermal sensing device (15) and the change amount inputted by the change amount input means (23) (Eqn 5).

In Re claim 3, Tanahashi discloses the predetermined change amount (temperature rise of the rotor) is a drive input amount (instantaneous current) (as shown in Eqns 1, 2, 5 and 6: temperature rise of the rotor is used to evaluate the secondary resistance R_2 and is then used to evaluate the current for driving the motor) (Col 3 line 39 to Col 4 line 26) for driving the component (rotor and induction motor 5) (since the temperature of the rotor controls the voltage supplied to the motor; Col 1 line 55 to Col 2 line 24).

In Re claim 4, the component comprises a power drive unit (13, 14) that drives a motor (5) for causing a hoisting machine (7) to rotate in response to a command from the main control unit (20a) (Col 1 lines 15-54), and the drive input amount comprises a current value of the power drive unit (Col 3 line 39 to Col 4 line 26).

In Re claim 5, the predetermined change amount comprises a temperature rise amount of the component (Eqn 4: temperature rise of the rotor $\Delta\theta_Y$).

In Re claim 10, the change amount of the component comprises a time average (Col 4 lines 36-44). The temperature rise $\Delta\theta_Y$ is evaluated based on a thermal time constant *T*, and the time constant is subsequently evaluated by the number of revolutions of the motor (Eqns 8 and 9; Col 4 lines 36-60). Therefore, the time constant is calculated based on the number of revolutions measured in a period of time. Thus, the temperature rise represents the average temperature change in a period of time.

In Re claims 14 and 19, Uetake discloses the control unit reduces at least one of a plurality of elevator travel parameters (acceleration) if the temperature state exceeds a maximum of the permitted temperature state (Abstract), and it would have been obvious to one having ordinary skill in the art at the time of the invention was made to increase the acceleration while the temperature state does not exceed the permitted temperature (below the threshold) so as to be able to operate the elevator at its optimum speed under a safe condition.

5. Claims 15-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uetake (JP 2002003091 A) in view of Tanahashi et al. (US 4,629,035) as applied to claims 1 and 18 above, and further in view of Holland (US 4,658,935).

In Re claims 16 and 20, Uetake and Tanahashi discloses the claimed invention except the controller determines a plural of sets of elevator travel parameters and selects one of the sets based upon a comparison of one of the parameters in the sets.

However, Holland discloses a selector system determines a plural of sets of elevator travel parameters (acceleration and deceleration look-up tables) (Col 8 lines 40-65) and selects travel parameters based upon a comparison of one of the parameters in the sets (Abstract: e.g. comparing the calculated profile with the pre-stored deceleration table).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Uetake and Tanahashi with the teachings of Holland, since it is known in the art to compare the parameters of a plural of sets of elevator travel parameters in an elevator control system so that the elevator can be operated in an ideal speed.

In Re claims 15 and 17, Holland discloses the elevator travel parameters comprise acceleration, deceleration, jerk, and speed (Col 8 lines 40-48).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kawing Chan whose telephone number is (571)270-3909. The examiner can normally be reached on Mon-Fri 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. C./
Examiner, Art Unit 2837

/Walter Benson/
Supervisory Patent Examiner, Art Unit 2837